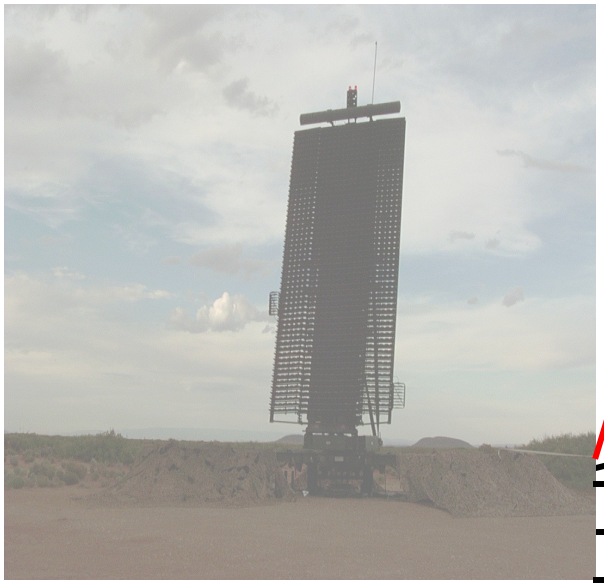
USMC TBM CAPABILITY

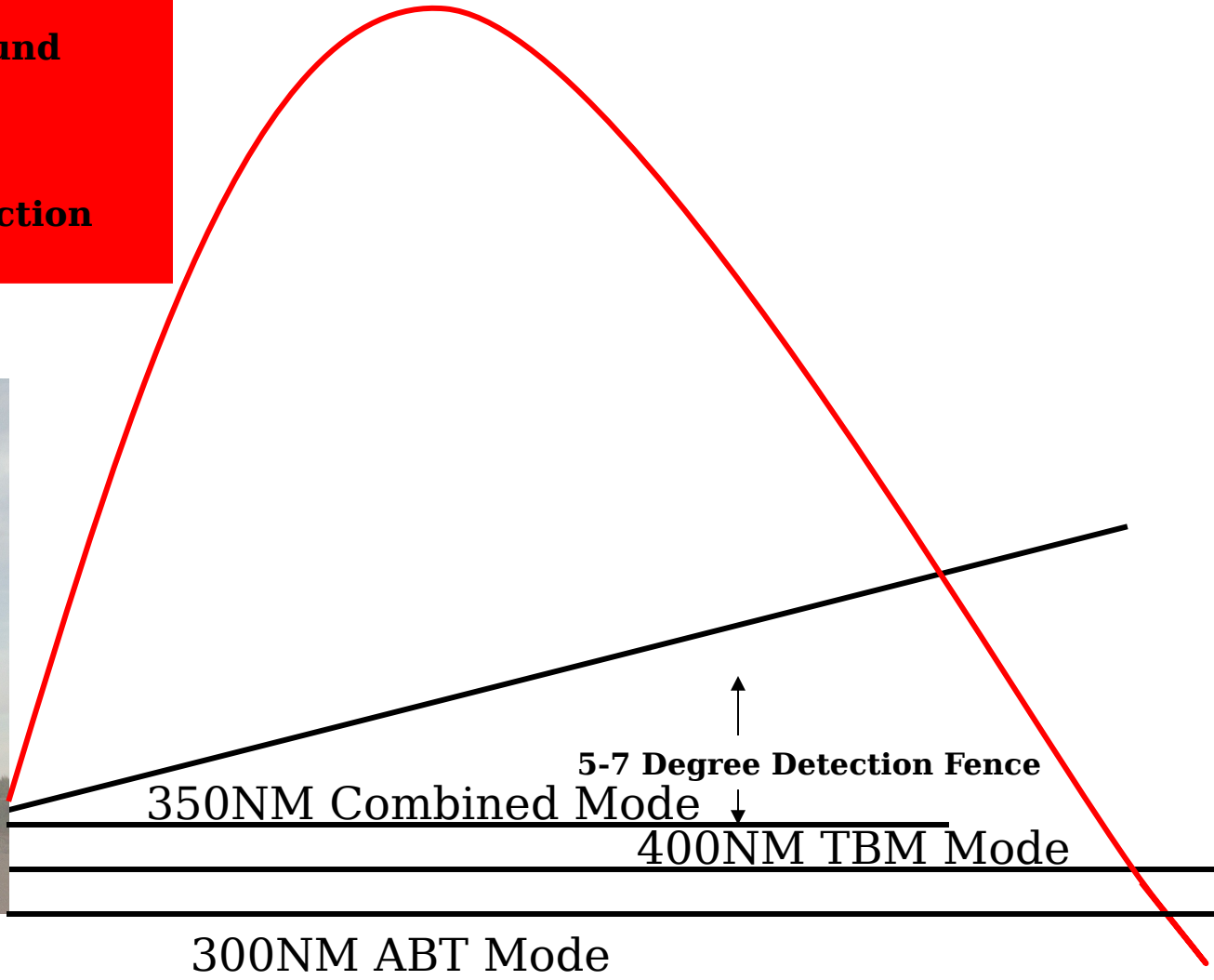
TBM Detection and Reporting Capability

- **TPS-59(V)3 Radar/ADCP**
  - Jan 1996 TBM capability development and fielding was combined MCSC and MDA Effort
  - Air Defense Communications Platform fielded in conjunction with TPS-59(V)3 radar
    - Provides Link-16 3.6/J3.0 capability
    - Receives TBM track from radar
    - Generates J3.6/J3.0 in conformance with MilStd 6016

TPS-59 (V)3 Radar

1) TBM must pass through detection fence
2) TBM must be an inbound track
2) Tracks to altitude of 1,000,000 Feet
3) 0.1 meter square detection and tracking





TBM Exercise Participation

- **Foal Eagle 1999**
  - **Validated TBM Capability in MDA Sponsored Exercise**
  - **Identified need for Radar Cue**
- **Pacific Blitz 2000**
  - **Tested TADIL-J Cue capability**
  - **Successfully Tracked outbound Target from cue**
- **Roving Sands-01**
  - **Deployed 2 production RES to RS exercise**
  - **Validated Production RES capability**
  - **Identified Need for False Alarm Reduction capability**
- **Future exercises**
  - **Counter Measures Program-03**
  - **RSOI-03 March 03**
  - **RS-03 June 03**

Radar Environmental Simulator

- Pre-production RES developed to provide ability to conduct TPS-59(V)3 developmental testing
  - Engineer tool, limited GUI interface
  - MDA sponsored TMDSE capability implementation
  - Entity manipulation developed and maintained to the TMDSE standard
- USMC purchased five production RES
  - Developed improved standalone operation GUI
  - Production RES not TMDSE capable
- June 01 MCSC funded RES software upgrade
  - Started development of improved GUI
  - Developed ability to select mode of operation
    - Standalone
    - TMDSE
    - DIS CAMDEN
    - JDEP
  - Jan 02 MCSC software upgrades to Production RES, enabling support of TMDSE delivered to MCTSSA.

USMC Issues and Concerns

- False Alarms
  - Implementation of the FAR software upgrade to resolve this issue
    - Need to collect data during both live and simulated events to confirm resolution
    - Implementation of fix tied to upgrade of the Post Detection Processor (PDP) and the upgrade of the Digital Signal Processors (DSP)
- Data Registration System Engineering Team (DR SET)
  - Existing issues need to be defined and resolution of DR SET identified for implementation

USMC Issues and Concerns

- RES usability and DIS CAMDEN incompatibility
  - RES still unable to be easily integrated into DIS CAMDEN network
  - Completion of GUI
    - Allows Marine personnel to integrate and operate RES for each mode of operation
    - Eliminates need for high cost contractor support of each joint exercises event

USMC Issues and Concerns

- Continued MDA/JFCOM Exercise data collection and analysis support
  - Data collection and analysis of USMC joint interoperability requires funding

Summary

- Discussed the evolution and growth of the TPS-59/ADCP TBM system
- Discussed exercise participation in which MCSC participated
- Discussed the major issues and concerns of MCSC